

REMARKS

Claims 56-89 are pending in this application. By this Amendment, claims 38, 46-48 and 50-55 are cancelled, and claims 56-89 are added. Support for the new claims may be found, for example, in the original claims and throughout the specification. No new matter is added.

In view of the foregoing amendments and following remarks, reconsideration and allowance are respectfully requested.

I. Interview

The courtesies extended to Applicants' representatives by Examiner Li and Supervisory Examiner Campell at the interview held on August 28, 2007, are appreciated. The reasons presented at the interview as warranting favorable action are incorporated into the remarks below and constitute Applicants' record of the interview.

II. Rejection under 35 U.S.C. §112, First Paragraph

The Office Action rejects claims 38, 46-53, and 54-55 under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement. By this Amendment, claims 38, 46-53, and 54-55 are cancelled, thereby rendering their rejection moot.

The Office Action asserts that (1) not every peptide comprising any 20 amino acids with 80% identity with 20 amino acid residues in the cyt. region of human endogenous retrovirus W (HERV-W) envelope protein can be used for detecting the expression of the claimed polypeptide via syncytia formation, and (2) that contacting a polypeptide alone with a cell expressing a receptor is not enabled for detecting the interaction of the claimed polypeptide with its receptor.

By this Amendment, new claims 56-89 are presented to more clearly recite various novel features of the claimed invention, with particular attention to the Examiner's comments.

Specifically, independent claim 56 recites that "...an interaction occurs between a

polypeptide of a producer cell and a neutral amino acid transporter cell surface receptor of an indicator cell *ex vivo* or *in vitro*, wherein the polypeptide has a sequence selected from the group consisting of: a sequence which comprises amino acids 448-538 of SEQ ID NO:1, a sequence which has, for each series of 20 amino acids, at least 80% identity with 20 contiguous amino acids of amino acids 448-538 of SEQ ID NO:1..." This language was discussed at the interview and it was agreed that it would overcome both aspects of the §112 rejection. In addition, claim 56 recites a third option for the polypeptide sequence, which is also fully enabled under §112.

Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

III. Rejection Under 35 U.S.C. §102

The Office Action rejects claims 38, 46-48, and 50-55 under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,312,921 to Jacobs et al. ("Jacobs") in light of the disclosure by Castagna et al., J. Experimen. Biol. 1997, vol. 200, pp. 269-286, ("Castagna") or Rasko et al. Proc. Natl. Acad. Sci. USA, Mar. 1999, vol. 96, pp. 2129-2134 ("Rasko"). By this Amendment, claims 38, 46-48, and 50-55 are cancelled, rendering their rejection moot.

Without conceding the propriety of the rejections, new independent claim 56 is presented to more clearly recite various novel features of the claimed invention, with particular attention to the Examiner's comments. Specifically, claim 56 is presented to recite that "...contacting said indicator cell with said producer cell; observing formation of syncytia between said producer cell and said indicator cell or non-formation of syncytia between said producer cell and said indicator cell; and correlating said formation of syncytia with occurrence of an interaction between the polypeptide of the producer cell and the neutral amino acid transporter cell surface receptor of said indicator cell or correlating said non-formation of syncytia with a lack of an interaction between the polypeptide of the producer

cell and the neutral amino acid transporter cell surface receptor of said indicator cell." Jacobs fails to teach or suggest such features.

Jacobs describes a clone designated as AJ172_2 and a predicted amino acid sequence encoded thereby. *See* column 21, lines 52-27. Jacobs indicates that this protein can mediate cell-to-cell fusion events leading to the formation of giant syncytia. *See* column 55, lines 42-48. Jacobs further teaches, however, that the observed fusion events do not require homophilic or heterophilic protein-protein interactions. *See* column 56, lines 27-33. Jacobs fails to teach or suggest a method for detecting a polypeptide involving the steps of contacting an indicator cell with a producer cell; observing formation of syncytia between said producer cell and said indicator cell or non-formation of syncytia between said producer cell and said indicator cell; and correlating said formation of syncytia with occurrence of an interaction between the polypeptide of the producer cell and the neutral amino acid transporter cell surface receptor of said indicator cell or correlating said non-formation of syncytia with a lack of an interaction between the polypeptide of the producer cell and the neutral amino acid transporter cell surface receptor of said indicator cell (emphasis added), as required by claim 56. *See* also dependent claim 74 regarding further details of the correlation and claims 83 and 89, regarding steps involving the results of the correlation. In addition, Jacobs also fails to disclose or suggest the features of various other dependent claims.

Castagna and Rasko fail to cure the deficiencies of Jacobs.

Therefore, claims 56-89 are not anticipated by Jacobs even in view of Castagna and Rasko. *See* Laboratory Corp. of America v. Metabolite Laboratories, Inc., 370 F.3d 1354 (Fed. Cir. 2004), cert. dismissed (2006). Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

IV. Rejection under 35 U.S.C. §112, First Paragraph

The Office Action rejects claims 38, 46-53, and 54-55 under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. In particular, the Office Action asserts that the recitation "wherein the sequence has at least an 80% identity with amino acids 470-489" is not supported by the specification and therefore constitutes new matter.

By this Amendment, claims 38, 46-53, and 54-55 are cancelled, thereby rendering their rejection moot. New claims 56-89 are presented, deleting the recitation "wherein the sequence has at least an 80% identity with amino acids 470-489." Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

V. Rejection under 35 U.S.C. §102(a)

Claims 38, 46-48, and 50-55 are rejected under 35 U.S.C. §102(a) as being anticipated by Blond, et al., J. Virol. Vol. 74 No. 7; pp. 3321-3329 (April 2000) ("Blond"), in light of Rasko. By this Amendment claims 38, 46-48, and 50-55 are cancelled, rendering their rejection moot.


Applicants anticipate submitting evidence to remove Blond as an alleged reference.

VI. Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of the application are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,


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Date: September 10, 2007

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